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1879/80

Medical Department,
University of California.

ANNOUNCEMENT, 1880.

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ANNUAL ANNOUNCEMENT

OF THE

MEDICAL DEPARTMENT

OF THE

University of California.

(TOLAND HALL.)

SEVENTEENTH SESSION.

1880.

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UNIVERSITY OF ILLINOIS.

Alumni of the Medical Department of the University and others desiring to receive
the Announcement regularly are requested to send their names and addresses to the Secretary.

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DEPARTMENT OF MEDICINE.

FACULTY.

- JOHN LeCONTE, M.D., LL.D., *President of the University.*
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R. BEVERLY COLE, A.B., M.D., M.R.C.S., Eng., *Professor of Obstetrics and Gynecology.*
C. M. BATES, M.D., *Professor of Clinical Medicine and Physical Diagnosis.*
M. W. FISH, M.D., *Professor of Physiology and Histology.*
JAMES SIMPSON, M.D., *Professor of Materia Medica and Therapeutics.*
F. W. HATCH, A.M., M.D., *Professor of Hygiene.*
N. J. MARTINACHE, M.D., *Professor of Ophthalmology and Otology.*
G. A. SHURTLEFF, M.D., *Professor of Mental Diseases and Medical Jurisprudence.*
ROBERT A. McLEAN, M.D., *Professor of Principles and Practice of Surgery.*
A. W. PERRY, M.D., *Professor of Medical Chemistry.*
WILLIAM LEWITT, M.D., *Professor of Anatomy.*
W. F. McNUTT, M.D., F.R.C.S., EDIN., *Professor of Principles and Practice of Medicine.*
H. FERRER, M.D., *Professor of Pathology and Microscopy.*
W. B. LEWITT, M.D., *Demonstrator and Assistant Lecturer on Anatomy.*
W. H. MAYS, M.D., *Assistant Lecturer on Gynecology and Obstetrics.*

R. BEVERLY COLE, M.D., DEAN,
518 Sutter Street, San Francisco.

R. A. McLEAN, M.D., SECRETARY,
603 Merchant Street, San Francisco.

The PRELIMINARY COURSE for 1880 will commence Monday, February 2d, and continue till Saturday, May 15th.

The REGULAR TERM will commence Tuesday, June 1st, and terminate October 30th.

The Lectures of both Courses are delivered at the College building (Toland Hall), Stockton street, below Chestnut, San Francisco.

The Annual Commencement for conferring the Degree of Doctor of Medicine will be held early in November, at San Francisco.

ANNOUNCEMENT, 1880.

The Medical Department of the University of California was organized in 1872 as an integral part of the State's great educational centre. Its increasing prosperity is especially gratifying to the Faculty, and assures them that their efforts to improve the methods of instruction have not been unappreciated by the profession. Since its inauguration it has been the endeavor of the Regents and Faculty to perfect and exalt the system of medical education, that the School may be behind none in America in thoroughness. They point with some pride to the fact that the Medical Department of the University was among the first to take the initiative in instituting graded studies and a three years' course—a step in advance which some of the best friends of medical education on the coast feared might be premature or impracticable, but which events have shown to have been both judicious and successful. The adoption of the higher standard two years ago, and, as a sequence, the unmistakable improvement in the qualifications of its graduates have resulted in the increasing reputation of the School in the profession, and out of it a feeling of security in the knowledge that the training provided by the State Medical School insures the competency of its alumni.

It will be apparent that a graduate of this institution, under its present reformed curriculum, has been advanced from the elementary to the higher branches through three separate regular courses of lectures; he has been trained to apply his knowledge by thoroughly systematized series of clinical lectures; he has been taught to put his theories to the test at the bedside, the post-mortem room, the amphitheatre, the laboratory. Under the old system of two years' study, this completeness was impossible, and the outcry against it was a justifiable condemnation of inefficiency long sanctioned by custom. It may safely be premised that the graduate of the few schools which still cling to the two years' standard will find himself less and less favored with the respect and confidence of the public. Measured against the graduate of the superior school, his deficiencies cannot but stand sharply outlined; and his success must unquestionably be of slower growth than that of the more finished student, trained in medical ways by constant drilling, and provided with the solid basis of a full knowledge of the essentials of our science.

LOCATION.

While the several other colleges of the State University are clustered at Berkeley, its Medical Department is, for convenience of clinical study, conducted wholly, or almost wholly, in San Francisco. The advantages for demonstrative teaching presented by a seaport city of 300,000 inhabitants, the railroad and steamship focus of perhaps half a hemisphere, will be recognized as almost unbounded.

The College building, known as "Toland Hall," a massive brick-and-stone edifice, is one of the most complete and stately Medical Colleges in the country. It is situated on North Beach, overlooking the Bay, the locality being one where the health and industrious habits of the student are promoted by quietness and pure air. The main Lecture Hall of the College is capable of seating five hundred persons; the Clinical Amphitheatre is about equally as capacious; the Museum contains an extensive collection of specimens and preparations; the Dissecting room is fitted up with all the modern improvements; the Laboratory is replete with all chemicals and apparatus necessary for practical teaching. A suite of apartments in the building is set apart to the Dispensary Clinics.

The College stands near the terminus of the Omnibus line of street-cars, and the North Beach and Mission Line is distant one block further.

HOSPITALS.

The facilities for clinical instruction have been largely augmented, and in few medical schools are so many opportunities for bed-side study at the command of the student. They may be briefly enumerated as follows:

City and County Hospital.—The pile of handsome buildings known as the City and County Hospital is open to students throughout. It contains nearly 500 beds, and presents for observation perhaps every known form of disease, including those peculiar to tropical and South America. The staff of the Hospital is largely drawn from the Faculty of the University, and the control they exercise over the wards gives them unusual advantages for developing clinical material. The Professor of Surgery has charge of three surgical wards (thirty-two beds in each), the Professor of Clinical Medicine two wards, the Professor of Obstetrics and Gynecology and the Professor of Ophthalmology one ward each. Autopsies are conducted three times a week by the Professor of Pathology. A large operating theatre has recently been erected, where the major and minor operations of surgery are performed in full view of the class. Operating days are Tuesday and Saturday. The Hospital is situated at the junction of Twenty-second Street with Potrero Avenue, and is accessible from the North Beach and Mission Street cars.

City Receiving Hospital (Old City Hall).—Through the courtesy of Dr. Blach, City Physician, and Dr. Stivers, Police Surgeon, students can attend the daily service of this institution, the depot for accidents and casualties occurring throughout the city limits.

San Francisco Female Hospital, 930 Clay Street.—This institution is also open to the attendance of the senior students of this school, through the kindness of the surgeon in charge, Dr. Hutchins.

THE HIGHER STANDARD OF EDUCATION.

The question of the more thorough education of the student has of late been a prominent one in medical circles. As early as 1875 the Regents and Faculty of the University faced the necessity boldly and proceeded to modify its curriculum in accordance with the changes adopted by Harvard, the University of Pennsylvania, and some one or two other of the leading medical schools. The reforms then introduced, providing for a higher standard of requirement for graduation and greater perfection of teaching, were:

1. *Increase of the time of study to three years.* Three regular courses of lectures, attended through three several years, are required before the student can present himself for graduation. The courses are, as before, of five months duration. Students are also expected to attend the clinics regularly throughout the term.

2. *Graded studies.* A table is given below of the branches of study appointed to each year. By this arrangement the student is thoroughly drilled in the elementary subjects before proceeding higher. He is, however, recommended to attend all the lectures, giving most of his hours of study to the subjects allotted to his own year.

3. *Yearly Examinations.* At the close of each session, examinations are held, to determine the progress of the student during the year; his advancement depending on the result of such examinations. These examinations are *not final*, and the examination for graduation at the close of the third year includes the whole domain of medical study.

The following are the subjects apportioned to each year's study:

First Year.—Descriptive Anatomy, General Chemistry, Physiology and Materia Medica.

Second Year.—General and Surgical Anatomy, Medical and Physiological Chemistry, Physiology of the Nervous System and Reproduction, Therapeutics and Pathology.

Third Year.—At the close of the year examinations will be held on all the subjects hitherto gone over, together with Practice of Medicine, Surgery, Obstetrics, Diseases of Women, Diseases of Children, Diseases of Eye and Ear

THE COLLEGIATE YEAR.

Contrary to the custom of Eastern and other medical Colleges, the Regular Term of this school is held during the summer, not the winter, months. The peculiar climate of San Francisco renders summer far the more preferable season for prosecuting medical studies, hence the regular session has always been held from June to October. During this period, and indeed largely throughout the other months of the year also, cool trade-winds blow across the city daily, moderating the temperature and particularly favoring the study of practical anatomy and necroscopy. The student in this city enjoys rare natural advantages for the healthful pursuit of his labors, such a contingency as his detention from lectures or clinics by stress of weather being absolutely unknown.

The College year is divided into two terms: The Preliminary or Spring Term, and the Regular or Summer Term.

The Preliminary Term commences February 1st and ends May 15th. During this term subjects are dwelt upon that do not receive their full meed of attention during the Regular term. Clinics proceed at the Hospital and College as during the Regular Term. The Dissecting-room is open for practical work. Students are expected to attend this preliminary course, although such attendance is not compulsory.

It includes lectures didactic and clinical by members of the Faculty.

The subjects handled during this session are chiefly those which form the basis of medicine, and were particularly designed to assist and encourage the junior classes. Students who are entering on the study of medicine are earnestly recommended to avail themselves of the advantages of this course.

No fee is charged for this session.

LECTURES OF PRELIMINARY TERM.

The Preliminary Term for 1880 will consist, in addition to the usual hospital instruction, of a complete course on the following subjects:

<i>Monday,</i>	9 A. M.	Diseases of Nervous System.	Professor McNUTT.
"	10 "	Diseases of Children.	Professor SIMPSON.
<i>Wednesday</i>	9 A. M.	Urinalysis and Chemical Physics.	Professor PERRY.
"	10 "	Gynecology.	Professor R. BEVERLY COLE.
"	3 P. M.	Histology.	Professor FISH.
"	4 "	Anatomy.	Dr. W. B. LEWITT.
<i>Friday,</i>	9 A. M.	Abdominal Tumors.	Dr. MAYS.
"	10 "	Minor Surgery & Surgical Dressings.	Prof. McLEAN.

Regular Term.—The Regular Session for 1880 begins Monday, June 1st, and terminates October 30th. During this term all the branches of medicine and surgery are taught, didactically and clinically. Regular clinics are held three days in the week at the City and County Hospital, where the professors of the practical chairs have charge of wards, and possess every advantage for the instruction of students. There is also an active clinic conducted twice a week at the College building, where a large number of patients are examined and treated before the classes. Lectures are given daily by the Professors, and evening recitations are held three times a week.

An idea of the course of study pursued during the regular term may be gained from the following table, which shows the order of lectures and clinics during the session of 1879:

MONDAY.	TUESDAY.	WEDNESDAY	THURSDAY.	FRIDAY.	SATURDAY.
8 A. M. Lecture. Prof. McLEAN.	8 A. M. Hosp. Clinic. Dr. FERRER.	8 A. M. Lecture. Prof. McLEAN.	8 A. M. Hosp. Clinic. Dr. FERRER.	8 A. M. Lecture. Prof. McLEAN.	8 A. M. Hosp. Clinic. Dr. FERRER.
9 A. M. Lecture. Prof. McNUTT.	9 A. M. Hosp. Clinic. Prof. BATES.	9 A. M. Lecture. Prof. McNUTT.	9 A. M. Hosp. Clinic. Prof. BATES.	9 A. M. Lecture. Prof. McNUTT.	9 A. M. Hosp. Clinic. Prof. BATES.
10 A. M. Lecture. Prof. COLE.	10 A. M. Hosp. Clinic. Prof. MARTINACHE.	10 A. M. Lecture. Prof. COLE.	10 A. M. Hosp. Clinic. Prof. COLE.	10 A. M. Lecture. Prof. COLE.	10 A. M. Hosp. Clinic. Prof. MARTINACHE.
11 A. M. Lecture. Prof. SIMPSON.	11 A. M. Hosp. Clinic. Prof. TOLAND.	11 A. M. Lecture. Prof. SIMPSON.	11 A. M. Hosp. Clinic. Prof. TOLAND.	11 A. M. Lecture. Prof. SIMPSON.	11 A. M. Hosp. Clinic. Prof. TOLAND.
1-30 P. M. College Clinic. Dr. MATS.			1-30 P. M. College Clinic. Dr. MATS.		
2 P. M. College Clinic. Profs. PERRY & McLEAN.	2 P. M. Laboratory Work.	2 P. M. Lecture. Prof. SHURTLEFF.	2 P. M. College Clinic. Profs. PERRY and McLEAN.	2 P. M. Lecture. Prof. HATOR.	
3 P. M. Lecture. Prof. FISH.	3 P. M. Lecture. Prof. PERRY.	3 P. M. Lecture. Prof. FISH.	3 P. M. Lecture. Prof. PERRY.	3 P. M. Lecture. Prof. FISH.	
4 P. M. Lecture. Prof. LEWITT.		4 P. M. Lecture. Prof. LEWITT.		4 P. M. Lecture. Prof. LEWITT.	
7 P. M. Recitation. Prof. LEWITT.		7 P. M. Recitation. Prof. McLEAN.		7 P. M. Recitation. Prof. McNUTT.	

It will be seen that the course of instruction, which extends over nine months of the year, aims at the thorough drilling of the student in both the fundamental and higher branches of medicine, and the development of practical physicians.

CLINICAL TEACHING.

The course of study pursued at this school comprises Clinical, Didactic and Laboratory Teaching. Especial prominence is given to the former, although it is endeavored that the three methods shall be so blended as to form one harmonious whole.

In *Clinical Teaching*, the plan pursued by the several clinical professors has for its aim the actual confronting of the student with the phenomena of disease, that the senses of sight, hearing and touch may be trained to aid in forming a correct diagnosis. This most important element of medical tuition has, by the untiring efforts of the faculty, been developed to the limits of the vast resources of this city. Few colleges have better clinical facilities than are enjoyed by the student of the University. They are as follows:

HOSPITAL CLINICS.

SURGERY.—Professor H. H. TOLAND, author of "*Toland's Practical Surgery*," &c., delivers clinical lectures on Practical and Operative Surgery at the City and County Hospital, on Tuesdays, Thursdays and Saturdays, throughout both Spring and Summer sessions. The abundant material at his disposal enables him to demonstrate most fully on the person of the patient the several surgical conditions, their diagnosis and treatment. Especial attention is given, in a ward devoted to the purpose, to the conduct of disorders of the genito-urinary organs and venereal diseases.

MINOR SURGERY.—Professor R. A. McLEAN conducts a course of minor surgery during the preliminary term. Instruction in this branch includes the application of bandages and the various dressings used in treating wounds, fractures, dislocations, &c.

CLINICAL MEDICINE.—Professor C. M. BATES delivers bed-side lectures at the same hospital each Tuesday, Thursday and Saturday. His method of imparting and educing knowledge is at once attractive and thorough, consisting of questions and answers on each patient examined, discussions on the plans of treatment proposed, and the examination of new cases by each senior student in rotation, in presence of the class. We take pleasure in announcing that, in addition to the usual clinics, Professor BATES will deliver a special course of clinical lectures on *Physical Diagnosis of the Chest*, commencing with the Regular term.

PRACTICAL GYNECOLOGY AND OBSTETRICS.—R. BEVERLY COLE M. D., F. R. C. S. Eng., the Professor of this chair, is the appointed Gynecologist of the City and County Hospital. His clinic is held on Tuesdays and Thursdays of each week, and consists of a full course of instruction in the diagnosis and treatment of diseases peculiar to women, the use of the speculum and sound, the application of pessaries, intra-uterine medication, &c. In

practical obstetrics each senior student has one or more cases of midwifery allotted to his entire control, the Professor aiding him and suggesting the necessary treatment where complications arise.

OPHTHALMOLOGY AND OTOTOLOGY.—Professor N. G. MARTINACHE, late *Chef de Clinique* to Weder, conducts, three times a week, a clinic of eye and ear diseases, and familiarizes each student severally in the use of the ophthalmoscope, the laryngoscope and the otoscope.

DISPENSARY CLINICS.

A free dispensary is maintained at the College building throughout the whole year. The number of patients prescribed for is very large, and excellent opportunities are afforded the student to gain acquaintance with the treatment and management of cases which form the ordinary run of office practice. The medicines prescribed are put up in the dispensary, that students may learn not only how to prescribe, but also how to dispense medicine—a matter of some importance to those who contemplate practising in country districts.

To the students of the Senior Class externe cases are assigned by the directors of clinics, so that the student will be practiced in the duties that will devolve upon him when he assumes the obligations and responsibilities of the profession.

The clinics are so arranged as in no wise to interfere with the didactic instruction. They are held each Monday and Friday, and comprise a clinic of

Surgery, by Prof. McLEAN.

Diseases of Children, by Prof. PERRY.

Gynecology and General Diseases of Women, by Dr. MAYS.

Diseases of Eye and Ear, by Prof. MARTINACHE.

DIDACTIC TEACHING.

The Didactic Lectures of both Terms are delivered at the College Building. A brief outline of the course pursued in the several departments will be found in the following summary:

SURGERY.

Professor McLEAN delivers three lectures each week on the art and science of surgery. The more recent views on the management of surgical conditions and the appliances devised for their relief are particularly dwelt upon and illustrated with drawings and models, when necessary. This course will include a series of lectures upon operative surgery, with demonstrations on the cadaver. The student will be drilled in the manipulation of instruments used in the various operations.

PRACTICE OF MEDICINE.

Professor McNUTT presents in his lectures on this course the principles and practice of medicine in all its modern aspects. He endeavors to give a faithful description of diseases, their etiology, pathology, symptoms, diagnosis, prognosis and treatment. The pathological changes which occur in different diseases are demonstrated by means of plates, preparations, and recent specimens of diseased parts.

OBSTETRICS

Professor R. BEVERLY COLE will spare no efforts to bring everything pertaining to this science clearly and practically before the mind of the student. The lectures are illustrated by colored drawings, wet and dry preparations and the manikin. The principal obstetric operations are performed on the cadaver in presence of the class, thus demonstrating, in the most impressive manner, the principles which are to govern the practitioner in the management of the accidents and difficulties of child-birth.

CHEMISTRY.

Professor PERRY will spare no effort to make the course in Chemistry thoroughly practical and instructive. All important principles are illustrated by means of suitable philosophical, chemical and other apparatus, and facts and theories are presented in a clear and comprehensive manner.

PHYSIOLOGY.

The lectures in this department by Professor FISH embrace a consideration of both general and special Physiology, including all that has been developed up to the present time, and are illustrated by the largest and most complete series of colored drawings in the United States, prepared exclusively for these lectures. Besides which the vast collection of preparations and drawings of the Scientific Department at Berkeley are at the command of the Professor. *Vivisections* are practiced when necessary to demonstrate principles, and the microscope is freely used for illustrating important facts and principles.

ANATOMY.

Professor W. LEWITT's lectures on Anatomy are illustrated fully by the *cadaver*, and by both wet and dry preparations, models, manikins and drawings, and include a course on general, special and topographical anatomy, thus preparing the student for active surgical practice, as well as giving him a thorough knowledge of the relation of organs. Before each lecture a short examination is held on the subject of the preceding lecture.

GYNECOLOGY.

This practical branch of the science of medicine and surgery, which of late years has made such rapid strides toward development, and which includes so large a proportion of the diseases coming under the observation of the medical man, will be fully taught, both didactically and clinically, by Professor R. BEVERLY COLE. A supplementary course on topics connected with this chair will be delivered by Dr. W. H. MAY.

MATERIA MEDICA AND THERAPEUTICS.

Professor SIMPSON will endeavor to demonstrate as far as possible the physiological and antagonistic properties of drugs, selecting for this purpose the modes best calculated to impress the student. The therapeutical action of the different remedial agents will be especially dwelt upon, and explained where practical, by clinical teaching and observation. The lectures will be illustrated by colored drawings from nature, by the exhibition of the various medicinal plants and preparations in use and by showing their reactions and combinations. Recent additions to the materia medica, particularly those indigenous to this coast, will be presented and described.

MEDICAL JURISPRUDENCE AND MENTAL DISEASES.

Professor SHUTLEFF will exhibit in this department the principles of legal medicine and the duties of medical men as experts in giving testimony in courts of justice, and in the examination of medico-legal questions; will embrace a view of insanity, suicide, infanticide, legitimacy, poisoning, death, injury from violence, feigned sickness, duties of coroners, and other topics of practical importance, together with a thorough course on diseases of the mind. The facilities for observation of insanity at the command of the professor of this department are unequalled. For many years the Physician-in-Chief of the State Lunatic Asylum, his vast experience has necessarily made him the authority on these diseases, and must render his course eminently interesting and practical.

HYGIENE.

The importance now attaching to the science of hygiene has induced the Regents and Faculty to give it a place in the curriculum of the school. The professor of this chair, Dr. F. W. HATCH, is Permanent Secretary of the State Board of Health. The knowledge of the subject which his position necessarily brings him, in addition to his established reputation as a lecturer and teacher, make this chair both interesting and instructive.

PRACTICAL ANATOMY.

The Dissecting-room of the University is spacious, well ventilated, well lighted from above, and provided with every convenience. It is open throughout the year, under the superintendence of the Professor of Anatomy and the Demonstrator. A full supply of material is always procurable at small cost, and is thoroughly preserved from decomposition. When the dissections are conducted in a diligent manner, the student is furnished by the Demonstrator with certificates stating the amount and part dissected. The Dissecting-ticket (ten dollars) is good for the whole year, from January 1st to December 31st.

REQUIREMENTS FOR GRADUATION.

I. The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years, and be of good moral character.

II. He must have studied medicine three full years, and must have attended three regular courses of lectures the last of which must have been that of the University of California.

III. He must have passed the required examinations, written and oral.

IV. He must have pursued the study of practical anatomy during at least two sessions, and present certificates of having dissected every part of the cadaver.

V. Each candidate is required to deposit with the Secretary of the Faculty a thesis on some medical subject, written and composed by himself.

VI. He must have paid in full the College fees, including the graduation fee.

Students who have attended one full course in any recognized Medical College, shall, upon satisfactory examination in the curriculum provided for the first year, be admitted as students of the *second course* in the University of California.

Students who have attended two courses in any recognized Medical College, shall be admitted as students of the *third course* in this Institution, on passing having passed a satisfactory examination in the curriculum provided for the second year.

Graduates of other regular Medical Colleges in good standing shall be admitted as students of the *third course* in this Institution without any examination.

BOARDING.

The expense of living in the city of San Francisco is not great. Good board, with room rent, may now be procured at the low rate of \$5 per week, at a convenient distance from the College building. Students from a distance may learn the address of these boarding-houses and other information by calling on the Secretary of the Faculty, Dr. R. A. McLEAN, 603 Merchant St.

FEES.

Matriculating Fee (paid but once).....	\$ 5
Demonstrator's Ticket.....	10
Fee for the 1st Course of Lectures.....	130
Fee for the 2d Course of Lectures.....	130
No fee is required for the third Course of Lectures.	
Graduating Fee.....	40

PRIZE OFFERED.

A prize of twenty-five dollars will be awarded by Professor LEWITT to the student who shall prepare, with the greatest diligence, care and skill, an anatomical specimen, or, preferredly, an anomalous condition found in the dissecting-room.

TEXT-BOOKS AND WORKS OF REFERENCE.

Anatomy—Gray, Holden.

Physiology—Dalton, Flint, Kirke, Foster.

Chemistry—Fowne, Attfield, Roscoe.

Medical Chemistry—Tyson, Harley on Urine, Lehmann.

Histology—Rindfleisch, Stricker.

Surgery—Gross, Erichsen, Bryant, Holmes, Hamilton, Toland.

Practice of Medicine—Bristowe, Aitken, Roberts, Neimeyer.

Midwifery—Leishman, Playfair, Bedford, Tyler Smith.

Gynecology—Thomas, Barnes, Emmet, Sims.

Materia Medica and Therapeutics—Ringer, Bartholow, Wood, U. S. Dispensatory, Stille & Maish's Dispensatory.

Ophthalmology—Wells, Stellwag.

Otology—Turnbull, Roosa.

Pediatrics—Lewis Smith, West, Meigs and Pepper.

Dermatology—Tilbury Fox, Neumann.

Mental Diseases—Maudsley, Bucknell and Tuke, Winslow, Jones.

Pathology—Billroth, Paget, Wagner, Delafield.

GRADUATES, SESSION OF 1879.



D. M. ADDINGTON,
GILBERT FOOTE,
ROBERDEAU HARMON,
LEWIS J. HUGHES,
A. W. SCOTT,
AGNES SPARKS,

GEO. W. DOWNS,
H. A. GALE,
H. H. HOWELL,
ARTHUR JOHNSTONE,
GEO. S. SMITH,
W. C. VOIGT,

E. A. YOUNGER.

(APPENDIX.)

Literary and Scientific (Undergraduate) Departments

OF THE

UNIVERSITY OF CALIFORNIA,

INCLUDING

- | | |
|---------------------------|---------------------------|
| 1—COLLEGE OF LETTERS; | 3—COLLEGE OF MECHANICS: |
| (1) CLASSICAL COURSE; | 4—COLLEGE OF MINING. |
| (2) LITERARY COURSE; | 5—COLLEGE OF ENGINEERING: |
| 2—COLLEGE OF AGRICULTURE. | 6—COLLEGE OF CHEMISTRY. |

ACADEMIC SENATE.

- JOHN LECONTE, M.D., LL.D., *President, and Professor of Physics.*
WILLIAM ASHBURNER, *Honorary Professor of Mining.*
GEO. WOODBURY BUNNELL, A.M., *Professor of the Greek Language and Literature.*
GEO. DAVIDSON, A.M., *Honorary Professor of Geodesy and Astronomy.*
STEPHEN J. FIELD, LL.D., *Honorary Professor of Law*
FREDERICK G. HESSE, *Professor of Industrial Mechanics.*
EUGENE W. HILGARD, Ph. D., *Professor of Agriculture, Agricultural Chemistry, General and Economic Botany.*
MARTIN KELLOG, A.M., *Dean, and Professor of the Latin Language and Literature.*
JOSEPH LECONTE, M.D., LL.D., *Professor of Geology and Natural History.*
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FRANK SOULE, JR. (*U. S. Military Academy*), *Professor of Civil Engineering and Astronomy*
WILLIAM T. WELCKER (*U. S. Military Academy*), *Professor of Mathematics.*
JOHN W. BICE, Ph. B., *Instructor in Engineering.*
EDWARD BOOTH, Ph. B., *Instructor in Chemistry.*
ROSS E. BROWNE, *Instructor in Mechanical and other branches of Instrumental Drawing.*
SAMUEL B. CHRISTY, Ph. B., *Instructor in Mining and Metallurgy.*
JOHN B. CLARKE, Ph. B., *Instructor in Mathematics.*
GEORGE C. EDWARDS, Ph. B., *Instructor in Mathematics.*
CARLOS F. GOMPERTZ, *Instructor in Spanish.*
A. WENDELL JACKSON, JR., Ph. B., *Instructor in Mineralogy.*
HENRY B. JONES, *Assistant Instructor in French and German.*
WM. CAREY JONES, A.M., *Recorder of the Faculty and Instructor in Latin.*
EDMUND C. O'NEILL, Ph. B., *Instructor in Chemistry.*
EDWARD A. PARKER, Ph. B., *Instructor in Physics and Mechanics.*
JAMES M. PHILLIPS, A B., *Instructor in Hebrew, Chaldaic, and Syriac.*
ALBIN PUTZKER, *Instructor in German.*
JOSEPH C. ROWELL, A.B., *Librarian.*
JOSIAH ROYCE, JR., Ph. D., Balt., *Instructor in the English Language and Literature.*
E. H. SEARS, A.B., *Instructor in Latin and Greek.*
F. SLOTE, JR., B.S., *Superintendent of the Physical Laboratory.*
JOHN M. STILLMAN, Ph. B., *Instructor in Chemistry.*
AUGUST HARDING, *Assistant in Chemistry.*
FREDERICK W. MORSE, Ph. B., *Assistant in Agricultural Chemistry.*
CHARLES H. DWINELLE, Ph. B., *Lecturer on Practical Agriculture.*

ORGANIZATION.

The University maintains, at Berkeley, seven courses of study, commonly called "Colleges," namely:

In Science—AGRICULTURE, MECHANICS, ENGINEERING, CHEMISTRY, MINING.

In Letters—CLASSICAL, LITERARY.

For the five Colleges in Science, as well as for the Literary course in the College of Letters, the degree given at the close of the course is that of Bachelor of Philosophy. For the Classical course, the degree is that of Bachelor of Arts.

The various Scientific Colleges of the University are designed to give the student a good introduction to the principles of modern science, together with special instruction in that particular department which he may choose. The law of the State requires the maintenance of five distinct Colleges, or Courses. These are Agriculture, Mechanics, Mining, Engineering and Chemistry. The first two years of instruction in all these Colleges include nearly the same studies. A solid foundation is laid for all higher pursuits by the careful study of mathematics, and the elements of chemistry, natural philosophy, etc., as well as of English, French and German. At the beginning of the third year, the special subjects are made to predominate. In the third and fourth years of the full course, special attention is given to studies more immediately relating to any one of the five Colleges which the student may have elected. General studies receive a subordinate degree of attention.

The Classical course corresponds closely with that of Classical Colleges at the East.

The Literary course differs from the Classical chiefly in omitting Greek and advanced Latin, and in giving more attention to history, political economy, the English language and literature, and modern languages.

CLASSES OF STUDENTS.

The students at Berkeley are not only enrolled in separate Colleges, but in each College they may enter in regular or special courses. The regular courses are strongly recommended, instead of special courses, to those who want a thorough and systematic education. The special courses are adapted to those who desire to acquire proficiency in a single branch, or who are unable to remain long enough to pursue a full course.

SPECIAL COURSE STUDENTS.—Those are thus designated who take up but one or two lines of study, and they are not required to pass the general examinations for admission. They need only to satisfy the instructors in their specialties that they are qualified to profit by the exercises of the class. The permission is accorded only to those who have already made a considerable proficiency in knowledge. Access may thus be obtained to some scientific course, to the chemical laboratory, to instruction in some modern language, etc.

[NOTE.—Regular students who may fail to maintain their standing in one of the four classes will not be permitted, except in extraordinary cases, to take the position of Special Students.

STUDENTS AT LARGE.—Students who give all their time to special studies are designated as Students at Large. They are subject to all the regulations of the University, and are expected to make up for themselves a full schedule of study, approved by the Faculty. They will be required to pass the same entrance examination as candidates for the Colleges of Science, and may, by vote of the Faculty, be admitted as candidates for degrees.

OPTIONAL STUDIES.—Students already proficient in the studies laid down in the general scheme which they are following, or who have extra time at their disposal, may pursue optional studies, with the permission of the Faculty; or they may attend lectures and exercises appointed for other sections of the University, if it does not conflict with their regular appointments.

TERMS OF ADMISSION

FOR THE COLLEGES OF SCIENCE:

Candidates must pass a satisfactory examination in *Higher Arithmetic*, in all its branches, including the extraction of square and cubic roots, and the metric system of weights and measures; *Algebra* (Davies' Bourdon or equivalent) as far as the General Theory of Equations; *Geometry*, the nine books of Davies' Legendre, or their equivalent from another author *English Grammar*, *Rhetoric*, *Geography*, and *History of the United States*.

It is believed that these requirements can be met by a bright and determined scholar residing in any part of the State. The proper text books are easily procured. The examination is meant to be thorough and strict, but is not meant to be so technical or exacting as to deter scholars who have not had the best advantages of tuition. Students who show a capacity to pursue with profit the course marked out, are sometimes admitted on condition that they will make up their deficiencies. At the same time, thorough preparation, where it can be had, is of the greatest importance. Parents and teachers are earnestly requested to give good counsel in this respect to those who are coming to the University.

The following suggestions are made for the guidance of those who are able to do more than master the requisites above stated:

Although no requirements in Natural Science are specified, the study of Local Botany, Mineralogy and Natural History is earnestly recommended, both because of the knowledge which may be acquired, and because of the habits of accurate observation of nature which may thus be formed in early youth.

Students are advised to devote at least one year to the study of Latin before entering this department. It will greatly help their acquisition of Modern Languages, and will be useful in their study of science. Allen & Greenough's Grammar and Reader are especially commended as good manuals for this purpose.

Proficiency in some one or more of the Modern Languages is also very desirable.

FOR THE COLLEGE OF LETTERS:

1) *Classical Course*.—Candidates must pass a satisfactory examination in *Higher Arithmetic*; *Algebra*, to Quadratic Equations; *Geometry*, first four books (Davies' Legendre or Loomis'); *English Grammar*; *Rhetoric*; *Geography*; *History of the United States*; *Latin Grammar*, including prosody; *Cæsar*, four books; *Virgil*, Eclogues, Georgics, and six books of the *Æneid*; *Cicero*, six orations; *Greek Grammar*, including prosody; *Xenophon's Anabasis*, four books; *Homer's Iliad*, two books (omitting the catalogue). For the *Anabasis* equivalents will be accepted from Goodwin's Greek Reader.

Candidates will also be examined in the first forty-five pages of Allen & Greenough's Latin Composition, and in Jones' Greek Composition: or in their equivalents. Also, in Greek and Roman History.

Candidates will also be examined in Jones' Latin Composition, and in Jones' Greek Composition, or in their equivalents.

(2) *Literary Course*.—Candidates must pass a satisfactory examination in *Higher Arithmetic*; *Algebra*, to Quadratic Equations; *Geometry*, first four books (Davies' Legendre or Loomis'); *English Grammar*; *Rhetoric*; *Geography*; *History of the United States*; in the Latin Grammar and Reader; four books of *Cæsar*; and in Greek and Roman History. It is desirable, also, to possess an elementary acquaintance with some modern language. As a test of proficiency in practical grammar and composition, each applicant will be required to write a short English exercise, which he must be able to analyze and parse.

By the term *Rhetoric* is meant the study of *Rhetoric* and *Practical Composition* as commonly treated in such elementary text-books as Hart's "Manual of Composition and Rhetoric;" covering such subjects as Punctuation, Diction, the Properties of Style, Figures of Speech, Versification, and especially the practice of Prose Composition.

The knowledge required of Ancient History is such as may be obtained from Smith's "Smaller History of Greece" and "Smaller History of Rome."

A much more detailed statement than is here given, of the right method of preparation, has been prepared by the Faculty, and published as No. 6 of the "Bulletin of the University of California." Copies of this will be sent by mail to any one who applies for it.

FOR ADVANCED STANDING:

Candidates for advanced standing, whether from other colleges or not, in addition to the preparatory studies, are examined in those already pursued by the classes which they propose to enter.

Applicants should be at least sixteen years of age, and bring satisfactory testimonials. Young ladies, as well as young men, are received as students.

Tuition is Free to residents of California. Students from other States will be charged a matriculation fee of twenty-five dollars, and a tuition fee of fifty dollars per year, payable in advance, twenty-five dollars at the beginning of each half year.

EXAMINATIONS FOR ADMISSION—1880.

There are two series of Examinations for Admission: one held near Commencement time, the other at the beginning of the Academic Year, at the University buildings at Berkeley.

For 1880, the first will begin on Thursday, May 27th, at 10 o'clock A. M., and continue three days; the second will begin on Wednesday, August 4th, at 10 o'clock A. M., and continue three days.

Candidates may apply at either time; but, unless they live at a great distance, they will find it advantageous to appear at the first examination. Any minor deficiencies may thus be made up in the long vacation which precedes the opening of the year.

Candidates, on their arrival, may report themselves at once to the President or the Dean, in the North Hall.

The next Academic Year will begin at Berkeley, Thursday morning, August 5th. Instruction will begin on Monday, August 9th, at 9 A. M., when every student will be expected to be present.

All candidates for admission must conclude their examinations by August 6th.

The Post Office address of the University, of the officers and students engaged in the Colleges of Science and Letters, is Berkeley, California.

CALENDAR FOR 1879-80.

1879—August 7—Beginning of the First Term.

December 17—End of the First Term.

[Winter Vacation of three weeks.]

1880—January 8—Beginning of the Second Term.

May 27, 28, 29, 31—Examinations for Admission.

June 2—COMMENCEMENT—End of the year.

[Summer Vacation of nine weeks.]

August 4, 5, 6—Examinations for Admission.

August 5—Beginning of the First Term.

December 15—End of the First Term.

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1880/81

ANNUAL ANNOUNCEMENT
OF THE
Medical Department
OF THE
UNIVERSITY OF CALIFORNIA.
EIGHTEENTH SESSION.
1881.

Alumni of the Medical Department of the University and others desiring to receive the Announcement regularly are requested to send their names and addresses to the Dean.

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UNIVERSITY OF CALIFORNIA.

BOARD OF REGENTS.

HIS EXCELLENCY GEORGE C. PERKINS, Governor, *ex-officio* President of the Board.

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HON. J. F. COWDERY, Speaker of the Assembly.

HON. FREDERICK M. CAMPBELL, State Superintendent of Public instruction.

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P. B. CORNWALL, President of the Mechanics' Institute.

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DEPARTMENT OF MEDICINE.

FACULTY.

- JONH LÉCONTE, M.D., LL.D., *President of the University.*
- R. BEVERLY COLE, A.B., M.D., M.R.C.S., Eng., *Professor of Obstetrics and Gynecology.*
- C. M. BATES, M.D., *Professor of Clinical Medicine and Physical Diagnosis.*
- M. W. FISH, M.D., *Professor of Physiology and Histology.*
- JAMES SIMPSON, M.D., *Professor of Materia Medica and Therapeutics.*
- F. W. HATCH, A.M., M.D., *Professor of Hygiene.*
- N. J. MARTINACHE, M.D., *Professor of Ophthalmology and Otology.*
- G. A. SHURTLEFF, M.D., *Professor of Mental Diseases and Medical Jurisprudence.*
- ROBERT A. McLEAN, M.D., *Professor of Clinical and Operative Surgery.*
- A. W. PERRY, M.D., *Professor of Medical Chemistry.*
- WILLIAM LEWITT, M.D., *Professor of Anatomy.*
- W. F. McNUTT, M.D., F.R.C.S., Edin., *Professor of Principles and Practice of Medicine.*
- H. FERRER, M.D., *Professor of Pathology and Microscopy.*
- W. E. TAYLOR, M.D., *Professor of Principles and Practice of Surgery.*
- W. H. MAYS, M.D., *Lecturer on Gynecology and Obstetrics.*
- W. B. LEWITT, M.D., *Demonstrator and Assistant Lecturer on Anatomy.*

ROBERT A. McLEAN, M.D., DEAN,
603 Merchant Street, corner Montgomery, San Francisco.

The PRELIMINARY TERM for 1881 will commence Wednesday February 2d, and terminate Saturday, May 14th.

The REGULAR TERM will commence Wednesday, June 1st, and terminate October 29th.

The Lectures of both Courses are delivered at the College building (Toland Hall), Stockton street below Chestnut, San Francisco.

The Annual Commencement for conferring the Degree of Doctor of Medicine will be held early in November, in San Francisco.

ANNOUNCEMENT, 1881.

The Medical Department of the University of California was organized in 1872 as an integral part of the State's great educational centre. Since its inauguration it has been the endeavor of the Regents and Faculty to perfect and exalt the system of medical education, that the School may be behind none in America in thoroughness. They point with some pride to the fact that the Medical Department of the University was among the first to take the initiative in instituting graded studies and a three years' course—a step in advance which some of the best friends of medical education on the coast feared might be premature or impracticable, but which events have shown to have been both judicious and successful. The adoption of the higher standard three years ago, and, as a sequence, the unmistakable improvement in the qualifications of its graduates, have resulted in the increased reputation of the School in the profession, and out of it a feeling of security in the knowledge that the training provided by the State Medical School insures the competency of its alumni.

It will be apparent that a graduate of this institution, under its present reformed curriculum, has been advanced from the elementary to the higher branches through three separate regular courses of lectures; he has been trained to apply his knowledge by thoroughly systematized series of clinical lectures; he has been taught to put his theories to the test at the bedside, the post-mortem room, the amphitheatre, the laboratory. Under the old system of two years' study, this completeness was impossible, and the outcry against it was a justifiable condemnation of inefficiency long sanctioned by custom. It may safely be premised that the graduate of the few schools which still cling to the two years' standard will find himself less and less favored with the respect and confidence of the public. Measured against the graduate of the superior school, his deficiencies cannot but stand sharply outlined; and his success must unquestionably be of slower growth than that of the more finished student, trained in medical ways by constant drilling, and provided with the solid basis of a full knowledge of the essentials of our science.

LOCATION.

While the several other colleges of the State University are clustered at Berkeley, its Medical Department is, for convenience of clinical study, conducted wholly, or almost wholly, in San Francisco. The advantages for demonstrative teaching presented by a seaport city of nearly 300,000 inhabitants, will be recognized as almost unbounded.

The College building, known as "Tolaud Hall," a massive brick-and-stone edifice, is one of the most complete and stately medical colleges in the country. It is situated on North Beach, overlooking the Bay, the locality being one where the health and industrious habits of the student are promoted by quietness and pure air. The main Lecture Hall of the College is capable of seating five hundred persons; the Clinical Amphitheatre is about equally as capacious; the Museum contains an extensive collection of specimens and preparations; the dissecting room is fitted up with all the modern improvements; the Laboratory is replete with all chemicals and apparatus necessary for practical teaching. A suite of apartments in the building is set apart for the Dispensary Clinics.

The College stands near the terminus of the Omnibus line of street-cars, and the terminus of the North Beach and Mission Line is distant one block further.

HOSPITALS.

The facilities for clinical instruction have been largely augmented, and in few medical schools are more opportunities for bed-side study at the command of the student. They may be briefly enumerated as follows:

City and County Hospital.—The pile of handsome buildings known as the City and County Hospital is open to students throughout. It contains nearly 500 beds, and presents for observation perhaps every known form of disease, including those peculiar to tropical and South America. The staff of the Hospital is largely drawn from the Faculty of the University, and the control they exercise over the wards gives them unusual advantages for developing clinical material. The Professor of Surgery has charge of three surgical wards (thirty-two beds in each), the Professor of Clinical Medicine two wards, the Professor of Obstetrics and Gynecology and the Professor of Ophthalmology one ward each. Autopsies are conducted three times a week by the Professor of Pathology. A large operating theatre has recently been erected, where the major and minor operations of surgery are performed in full view of the class. Operating days are Tuesday and Saturday. The Hospital is situated at the junction of Twenty-second Street with Potrero Avenue, and is accessible from the North Beach and Mission Street cars.

City Receiving Hospital (Old City Hall).—Through the courtesy of Dr. Blach, City Physician, and Dr. Clarke, Police Surgeon, students can attend the daily service of this institution, the depot for accidents and casualties occurring throughout the city limits,

San Francisco Female Hospital, 806 Stockton Street.—This institution is also open to the attendance of the senior students of this school, through the kindness of the surgeon in charge, Dr. Hutchins.

THE HIGHER STANDARD OF EDUCATION.

The question of the more thorough education of the student has of late been a prominent one in medical circles. As early as 1875, the Regents and Faculty of the University proceeded to modify its curriculum in accordance with the changes adopted by Harvard, the University of Pennsylvania, and some one or two other of the leading medical schools. The forms introduced providing for a higher standard of requirement for graduation and greater perfection of teaching, are:

1. *Increase of the time of study to three years.* Three regular courses of lectures, attended through three several years, are required before the student can present himself for graduation. The courses are, as before, of five months' duration. Students are also expected to attend the clinics regularly throughout the term.

2. *Yearly Examinations.* At the close of each session, examinations are held, to determine the progress of the student during the year; his advancement depending on the result of such examinations. These examinations are *not final*, and the examination for graduation at the close of the third year includes the whole domain of medical study.

3. *Graded Studies.* By this arrangement the student is thoroughly drilled in the elementary subjects before proceeding higher. He is, however, recommended to attend all the lectures, giving most of his hours of study to the subjects allotted to his own year.

The following are the subjects apportioned to each year's study:

First Year.—Descriptive Anatomy, General Chemistry, Physiology and Materia Medica.

Second Year.—General and Surgical Anatomy, Medical and Physiological Chemistry, Physiology of the Nervous System and Reproduction, Therapeutics and Pathology.

Third Year.—At the close of the year examinations will be held on all the subjects hitherto gone over, together with Practice of Medicine, Surgery, Obstetrics, Diseases of Women, Diseases of Children, Diseases of Eye and Ear.

The Collegiate Year.

Contrary to the custom of Eastern medical colleges, the Regular Term of this school is held during the summer, not the winter months. The peculiar climate of San Francisco renders summer far the preferable season for prosecuting medical studies; hence, the regular session has always been held from June to November. During this period, and indeed, largely throughout the other months of the year also, cool trade-winds blow across the city daily, moderating the temperature and particularly favoring the study of practical anatomy and necroscopy. The student in this city enjoys rare natural advantages for the healthful pursuit of his labors, such a contingency as his detention from lectures or clinics by stress of weather being absolutely unknown.

The College year is divided into two terms: The Preliminary or Spring Term, and the Regular or Summer Term.

The Preliminary Term commences February 1st and ends May 15th. During this term subjects are dwelt upon that do not receive their full meed of attention during the Regular Term. Clinics proceed at the Hospital as during the Regular Term. The Dissecting Room is open for practical work. Students are expected to attend this preliminary course, although such attendance is not compulsory. It includes lectures, didactic and clinical, by members of the Faculty.

The subjects handled during this session are chiefly those which form the basis of medicine, and were particularly designed to assist and encourage the junior classes. Students who are entering on the study of medicine are earnestly recommended to avail themselves of the advantages of this course. No fee is charged for this session.

EXTRA LECTURES OF PRELIMINARY TERM.

The Preliminary Term for 1881 will consist, in addition to the usual hospital instruction, of a complete course on the following subjects:

<i>Monday,</i>	9 A. M.	Diseases of Circulatory Organs.	Professor McNUTT
"	10 "	Eruptive Diseases of Children.	Professor SIMPSON.
<i>Wednesday,</i>	9 "	Chemistry.	Professor PERRY.
"	10 "	Diseases of the Puerperal State.	Dr. MAYS.
"	2 P. M.	Recitations in Anatomy.	Dr. W. B. LEWITT.
"	3 "	Histology.	Professor FISH.
<i>Friday,</i>	9 A. M.		
"	10 "	Diseases of the Genito-Urinary Organs.	Professor TAYLOR.

Regular Term.—The Regular Session for 1881 begins Wednesday, June 1st, and terminates October 29th. During this term all the branches of medicine and surgery are taught, didactically and clinically. Regular clinics are held three days in the week at the City and County Hospital, where the professors of the practical chairs have charge of wards, and possess every advantage for the instruction of students. Lectures are given daily by the Professors, and evening recitations are held three times a week.

An idea of the course of study pursued during the regular term may be gained from the following table, which shows the order of lectures and clinics during the session of 1880:

MONDAY.	TUESDAY.	WEDNESDAY	THURSDAY.	FRIDAY.	SATURDAY.
8 A. M. Lecture. Prof. McLEAN.	8 A. M. Hosp. Clinic. Prof. FERRER.	8 A. M. Lecture. Prof. McLEAN.	8 A. M. Hosp. Clinic. Prof. FERRER.	8 A. M. Lecture. Prof. McLEAN.	8 A. M. Hosp. Clinic. Prof. FERRER.
9 A. M. Lecture. Prof. McNUTT.	9 A. M. Hosp. Clinic. Prof. BATES.	9 A. M. Lecture. Prof. McNUTT.	9 A. M. Hosp. Clinic. Prof. BATES.	9 A. M. Lecture. Prof. McNUTT.	9 A. M. Hosp. Clinic. Prof. BATES.
10 A. M. Lecture. Prof. COLE.	10 A. M. Hosp. Clinic. Prof. MARTINACHE.	10 A. M. Lecture. Prof. COLE.	10 A. M. Hosp. Clinic. Prof. COLE.	10 A. M. Lecture. Prof. COLE.	10 A. M. Hosp. Clinic. Prof. MARTINACHE.
11 A. M. Lecture. Prof. SIMPSON.	11 A. M. Hosp. Clinic. Prof. McLEAN.	11 A. M. Lecture. Prof. SIMPSON.	11 A. M. Hosp. Clinic. Prof. McLEAN.	11 A. M. Lecture. Prof. SIMPSON.	11 A. M. Hosp. Clinic. Prof. McLEAN.
2 P. M. College Clinic. Prof. PERRY & MAYS.	2 P. M. Laboratory Work.	2 P. M. Lecture. Prof. SHUTLEFF.	2 P. M. College Clinic. Prof. PERRY and MAYS.	2 P. M. Lecture. Prof. HATCH.	
3 P. M. Lecture. Prof. FISH.	3 P. M. Lecture. Prof. PERRY.	3 P. M. Lecture. Prof. FISH.	3 P. M. Lecture. Prof. PERRY.	3 P. M. Lecture. Prof. FISH.	
4 P. M. Lecture. Prof. LEWITT.		4 P. M. Lecture. Prof. LEWITT.		4 P. M. Lecture. Prof. LEWITT.	
7 P. M. Recitation. Prof. LEWITT.		7 P. M. Recitation. Prof. McLEAN.		7 P. M. Recitation. Prof. McNUTT.	

It will be seen that the course of instruction, which extends over nine months of the year, aims at the thorough drilling of the student in both the fundamental and higher branches of medicine, and the development of practical physicians.

CLINICAL TEACHING.

The course of study pursued at this school comprises Clinical, Didactic and Laboratory teaching. Special prominence is given to the former, although it is endeavored that the three methods shall be so blended as to form one harmonious whole.

In Clinical Teaching, the plan pursued by the several clinical professors has for its aim the actual confronting of the student with the phenomena of disease, that the senses of sight, hearing and touch may be trained to aid in forming a correct diagnosis. This most important element of medical tuition

has, by the untiring efforts of the Faculty, been developed to the limits of the vast resources of this city. Few colleges have better clinical facilities than are enjoyed by the student of the University. They are as follows:

HOSPITAL CLINICS.

SURGERY.—Professor McLEAN delivers clinical lectures on Practical and Operative Surgery at the City and County Hospital, on Tuesdays, Thursdays and Saturdays, throughout both Spring and Summer sessions. The abundant material at his disposal enables him to demonstrate most fully on the person of the patient the several surgical conditions, their diagnosis and treatment. Especial attention is given, in a ward devoted to the purpose, to the conduct of disorders of the genito-urinary organs and venereal diseases.

MINOR SURGERY.—Professor R. A. McLEAN conducts a course of minor surgery during the preliminary term. Instruction in this branch includes the application of bandages and the various dressings used in treating wounds, fractures, dislocations, etc.

CLINICAL MEDICINE.—Professor C. M. BATES delivers bed-side lectures at the same Hospital each Tuesday, Thursday and Saturday. His method of imparting and edueing knowledge is at once attractive and thorough, consisting of questions and answers on each patient examined, discussions on the plans of treatment proposed, and the examination of new cases by each senior student in rotation, in presence of the class. We take pleasure in announcing that in addition to the usual clinics, Professor BATES will deliver a special course of clinical lectures on *Physical Diagnosis of the Chest*, commencing with the regular term.

PRACTICAL GYNECOLOGY AND OBSTETRICS.—Dr. MAYS will hold a clinic every Thursday, which will include a full course of instruction in the diagnosis and treatment of diseases peculiar to women, the use of the speculum and sound, the application of pessaries, intra-uterine medication, etc. In practical obstetrics each senior student has one or more cases of midwifery allotted to his entire control, the teacher aiding him and suggesting the necessary treatment where complications arise.

OPHTHALMOLOGY AND OTOTOLOGY.—Professor MARTINACHE conducts three times a week, a clinic of eye and ear diseases, and familiarizes each student severally in the use of the ophthalmoscope, the laryngoscope and the otoscope.

DIDACTIC TEACHING.

The Didactic Lectures of both terms are delivered at the College Building. A brief outline of the course pursued in the several departments will be found in the following summary:

SURGERY.

Professor TAYLOR delivers three lectures each week on the art and science of surgery. The more recent views on the management of surgical conditions

and the appliances devised for their relief are particularly dwelt upon and illustrated with drawings and models when necessary. This course will include a series of lectures upon operative surgery, with demonstrations on the cadaver. The student will be drilled in the manipulation of instruments used in the various operations.

PRACTICE OF MEDICINE.

Professor McNUTT presents in his lectures on this course the principles and practice of medicine in all its modern aspects. He endeavors to give a faithful description of the diseases, their etiology, pathology, symptoms, diagnosis, prognosis and treatment. The pathological changes which occur in different diseases are demonstrated by means of plates, preparations and recent specimens of diseased parts.

OBSTETRICS.

Dr. W. H. MAYS will spare no efforts to bring everything pertaining to this science clearly and practically before the mind of the student. The lectures are illustrated by colored drawings, wet and dry preparations and the manikin. The principal obstetric operations are performed upon the cadaver in presence of the class, thus demonstrating, in the most impressive manner, the principles which are to govern the practitioner in the management of the accidents and difficulties of child-birth.

CHEMISTRY.

Professor PERRY will spare no effort to make the course in Chemistry thoroughly practical and instructive. All important principles are illustrated by means of suitable philosophical, chemical and other apparatus, and facts and theories are presented in a clear and comprehensive manner.

PHYSIOLOGY.

The lectures in this department by Professor FISH embrace a consideration of both general and special Physiology, including all that has been developed up to the present time, and are illustrated by the largest and most complete series of colored drawings in the United States, prepared exclusively for these lectures. Besides which the vast collection of preparations and drawings of the Scientific Department at Berkeley are at the command of the Professor. Vivisections are practiced when necessary to demonstrate principles, and the microscope is freely used for illustrating important facts and principles.

ANATOMY.

Professor W. LEWITT's lectures on Anatomy are illustrated fully by the *cadaver*, and by both wet and dry preparations, models, manikins and drawings, and include a course on general, special and topographical anatomy, thus preparing the student for active surgical practice, as well as giving him a thorough knowledge of the relation of organs. Before each lecture a short examination is held on the subject of the preceding lecture.

GYNECOLOGY.

This practical branch of the science of medicine and surgery, which of late years has made such rapid strides, and which includes so large a proportion of the diseases coming under the observation of the medical man, will be fully taught, both didactically and clinically, by Dr. W. H. Mays.

MATERIA MEDICA AND THERAPEUTICS.

Professor SIMPSON will endeavor to demonstrate, as far as possible, the physiological antagonistic properties of drugs, selecting for this purpose the modes best calculated to impress the student. The therapeutical action of the different remedial agents will be especially dwelt upon, and explained where practical, by clinical teaching and observation. The lectures will be illustrated by colored drawings from nature, by the exhibition of the various medicinal plants and preparations in use, and by showing their reactions and combinations. Recent additions to the materia medica, particularly those indigeneous to this coast, will be presented and described.

MEDICAL JURISPRUDENCE AND MENTAL DISEASES.

Professor SHURTLEFF will exhibit in this department the principles of legal medicine and the duties of medical men as experts in giving testimony in courts of justice, and in the examination of medico-legal questions; will embrace a view of insanity, suicide, infanticide, legtimacy, poisoning, death, injury from violence, feigned sickness, duties of coroners, and other topics of practical importance, together with a thorough course on diseases of the mind. The facilities for observation of insanity at the command of the professor of this department are unequaled. For many years the Physician-in-Chief of the State Lunatic Asylum, his vast experience has necessarily made him the authority on these diseases, and must render his course eminently interesting and practical.

HYGIENE.

The importance now attaching to the science of hygiene has induced the Regents and Faculty to give it a place in the curriculum of the school. The Professor of this chair, Dr. F. W. HATCH, is Permanent Secretary of the State Board of Health. The knowledge of the subject which his position necessarily brings him, in addition to his established reputation as a lecturer and teacher, makes this chair both interesting and instructive.

PRACTICAL ANATOMY.

The Dissecting-room of the University is spacious, well ventilated, well lighted from above, and provided with every convenience. It is open throughout the year, under the superintendence of the Professor of Anatomy and the Demonstrator. A full supply of material is always procurable at small cost, and is thoroughly preserved from decomposition. When the dissections are conducted in a diligent manner, the student is furnished by the Demonstrator with certificates stating the amount and part dissected. The dissecting ticket (ten dollars) is good for the whole year, from January 1st to December 31st.

REQUIREMENTS FOR GRADUATION.

I. The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years, and be of good moral character.

II. He must have studied medicine three full years, and must have attended three regular courses of lectures the last of which must have been that of the University of California.

III. He must have passed the required examinations, written and oral.

IV. He must have pursued the study of practical anatomy during at least two sessions, and present certificates of having dissected every part of the cadaver.

V. Each candidate is required to deposit with the Secretary of the Faculty a thesis on some medical subject, written and composed by himself.

VI. He must have paid in full the College fees, including the graduation fee.

Students who have attended one full course in any recognized Medical College, shall upon satisfactory examination in the curriculum provided for the first year, be admitted as students of the *second course* in the University of California.

Students who have attended two courses in any recognized Medical College, shall be admitted as students of the *third course* in this Institution, on passing a satisfactory examination in the curriculum provided for the second year.

Graduates of other regular Medical Colleges in good standing shall be admitted as students of the *third course* in this Institution without any examination.

BOARDING.

The expense of living in the city of San Francisco is not great. Good board, with room rent, may now be procured at the low rate of \$5 per week, at a convenient distance from the College building. Students from a distance may learn the address of these boarding-houses and other information by calling on the Dean of the Faculty, Dr. R. A. McLEAN, 603 Merchant St.

FEES.

Matriculating Fee (paid but once).....	\$ 5
Demonstrator's Ticket.....	10
Fee for the 1st Course of Lectures	130
Fee for the 2d Course of Lectures.....	130
No fee is required for the third Course of Lectures.	
Graduating Fee.....	40

PRIZE OFFERED.

A prize of twenty-five dollars will be awarded by Professor LEWITT to the student who shall show the greatest diligence and skill in preparing an anatomical specimen, or (preferably) an anomalous condition found while dissecting; the specimen, with the name of the successful competitor attached, to be deposited in the Museum.

Text-books and Works of Reference.

Anatomy—Gray, Holden, Ellis, Ford.

Physiology—Dalton, Flint, Kirke, Foster.

Chemistry—Fownes, Attfield.

Histology—Rindfleisch, Stricker.

Surgery—Gross, Erichsen, Holmes, Toland.

Practice of Medicine—Bartholow, Reynolds, Neimeyer.

Clinical Medicine—Da Costa, Flint, Loomis, Guttman.

Midwifery—Leishman, Playfair.

Gynecology—Thomas, Barnes, Emmet.

Materia Medica and Therapeutics—Ringer, Bartholow, Wood, U. S. Dispensatory, National Dispensatory.

Ophthalmology—Wells.

Otology—Turnbull, Roosa.

Pediatrics—Lewis Smith, West, Meigs and Pepper.

Dermatology—Tilbury Fox, Neumann.

Mental Diseases—Maudsley, Bucknell and Tuke, Winslow, Jones.

Pathology—Billroth, Paget, Wagner, Delafield.

GRADUATES, SESSION OF 1880.

F. A. BETTELHEIM,

H. H. CALDWELD,

T. P. HOPKINS,

J. L. FOULKES,

FRANKLIN F. LORD,

R. C. MEYERS,

H. E. MUELLER,

H. C. POND,

J. W. ROBERTSON,

HORACE LAIDLAW,

L. A. SABEY.

Literary and Scientific (Undergraduate) Departments

OF THE

UNIVERSITY OF CALIFORNIA.

INCLUDING

- | | |
|---------------------------|---------------------------|
| 1—COLLEGE OF LETTERS; | 3—COLLEGE OF MECHANICS; |
| (1) CLASSICAL COURSE; | 4—COLLEGE OF MINING; |
| (2) LITERARY COURSE; | 5—COLLEGE OF ENGINEERING; |
| 2—COLLEGE OF AGRICULTURE; | 6—COLLEGE OF CHEMISTRY. |

FACULTIES OF COLLEGES OF SCIENCE AND LETTERS.

- JOHN LECONTE, M.D., LL.D., *President, and Professor of Physics.*
WILLIAM ASHBURNER, *Honorary Professor of Mining.*
GEO. WOODBURY BUNNELL, A.M., *Professor of the Greek Language and Literature.*
GEO. DAVIDSON, A.M., *Honorary Professor of Geodesy and Astronomy.*
STEPHEN J. FIELD, LL.D., *Honorary Professor of Law.*
FREDERICK G. HESSE, *Professor of Industrial Mechanics.*
EUGENE W. HILGARD, PH. D., *Professor of Agriculture, Agricultural Chemistry, General and Economic Botany.*
MARTIN KELLOG, A.M., *Dean, and Professor of the Latin Language and Literature.*
JOSEPH LECONTE, M.D., LL.D., *Professor of Geology and Natural History.*
BERNARD MOSES, PH. D., *Professor of History and Political Economy.*
WILLARD B. RISING, PH. D., *Professor of Chemistry.*
EDWARD R. SILL, A.M., *Professor of the English Language and Literature.*
FRANK SOULE, JR. (*U. S. Military Academy*), *Professor of Civil Engineering and Astronomy.*
WILLIAM T. WELCKER (*U. S. Military Academy*), *Professor of Mathematics.*
JOHN W. BICE, PH. B., *Instructor in Engineering.*
ROSS E. BROWNE, *Instructor in Mechanical and other Branches of Instrumental Drawing.*
SAMUEL B. CHRISTY, PH. B., *Instructor in Mining and Metallurgy.*
JOHN B. CLARKE, PH. B., *Instructor in Mathematics.*
CHARLES H. DWINELLE, PH. B., *Lecturer on Practical Agriculture.*
GEORGE C. EDWARDS, PH. B., *Instructor in Mathematics.*
CARLOS F. GOMPERTZ, *Instructor in Spanish.*
A. WENDELL JACKSON, JR., PH. B., *Instructor in Mineralogy.*
HENRY B. JONES, *Assistant Instructor in French and German.*
WM. CAREY JONES, A.M., *Recorder of the Faculty and Instructor in Latin.*
EDMUND C. O'NEILL, PH. B., *Instructor in Chemistry.*
EDWARD A. PARKER, PH. B., *Instructor in Physics and Mechanics.*
JAMES M. PHILLIPS, A.B., *Instructor in Hebrew, Chaldaic and Syriac.*
ALBIN PUTZKER, *Instructor in German.*
JOSEPH C. ROWELL, A.B., *Librarian.*
JOSIAH ROYCE, JR., PH. D., *Balt., Instructor in the English Language and Literature.*
E. H. SEARS, A.B., *Instructor in Latin and Greek.*
F. SLATE, JR., *Superintendent of the Physical Laboratory.*
JOHN M. STILLMAN, PH. B., *Instructor in Chemistry.*
JOHN B. WILLCUTT, *Instructor in Chemistry.*
AUGUST HARDING, *Assistant in Chemistry.*
MYER E. JAFFA, PH. B., *Assistant in Agricultural Chemistry.*
FREDERICK W. MORSE, PH. B., *Assistant in Viticultural Laboratory.*

ORGANIZATION.

The University maintains, at Berkeley, seven courses of study, commonly called "Colleges," namely:

In Science—AGRICULTURE, MECHANICS, ENGINEERING, CHEMISTRY, MINING.

In Letters—CLASSICAL, LITERARY.

For the five Colleges in Science, as well as for the Literary course in the College of Letters, the degree given at the close of the course is that of *Bachelor of Philosophy*. For the Classical course the degree is that of *Bachelor of Arts*.

The various Scientific Colleges of the University are designed to give the student a good introduction to the principles of modern science, together with special instruction in that particular department which he may choose. The law of the State requires the maintenance of five distinct Colleges or Courses. These are Agriculture, Mechanics, Mining, Engineering and Chemistry. The first two years of instruction in all these Colleges include nearly the same studies. A solid foundation is laid for all higher pursuits by the careful study of mathematics and the elements of chemistry, natural philosophy, etc., as well as of English, French and German. At the beginning of the third year the special subjects are made to predominate. In the third and fourth years of the full course, special attention is given to studies more immediately relating to any one of the five Colleges which the student may have elected. General studies receive a subordinate degree of attention.

The Classical Course corresponds closely with that of Classical Colleges at the East.

The Literary course differs from the Classical chiefly in omitting Greek and advanced Latin, and in giving more attention to history, political economy, the English language and literature, and modern languages.

CLASSES OF STUDENTS.

The students at Berkeley are not only enrolled in separate Colleges, but in each College they may enter in regular or special courses. The regular courses are strongly recommended, instead of special courses, to those who want a thorough and systematic education. The special courses are adapted to those who desire to acquire proficiency in a single branch, or who are unable to remain long enough to pursue a full course.

TERMS OF ADMISSION.

FOR THE COLLEGE OF SCIENCE;

Candidates must pass a satisfactory examination in *Higher Arithmetic*, in all its branches, including the extraction of square and cubic roots, and the metric system of weights and measures; *Algebra* (*Clarke's Algebra* or equivalent); *Geometry*, the nine books of Davies' Legendre, or their equivalent from another author, *English Grammar*, *Rhetoric*, *Geography*, and *History of the United States*.

FOR THE COLLEGE OF LETTERS:

(1) *Classical Course*.—Candidates must pass a satisfactory examination in *Higher Arithmetic*; *Algebra*, to Quadratic Equations; *Geometry*, first four books (Davies' Legendre or Loomis'); *English Grammar*; *Rhetoric*; *Geography*; *History of the United States*; *Latin Grammar*, including prosody; *Cæsar*, four books; *Virgil*, six books of the *Æneid*; *Cicero*,

six orations; *Greek Grammar*, including prosody; *Xenophon's Anabasis*, four books; *Homers Iliad*, two books (omitting the catalogue); Jones' Latin Composition, and Jones' Greek Composition (equivalents); Greek and Roman History.

(2) *Literary Course*.—Candidates must pass a satisfactory examination in *Higher Arithmetic*; *Algebra*, to Quadratic Equations; *Geometry*, first four books (Davies' Legendre or Loomis'); *English Grammar*; *Rhetoric*; *Geography*; *History of the United States*; in the Latin Grammar and Reader; four books of *Cæsar*; and in Greek and Roman History. As a test of proficiency in practical grammar and composition, each applicant will be required to write a short English exercise, which he must be able to analyze and parse.

By the term Rhetoric is meant the study of Rhetoric and Practical Composition as commonly treated in such elementary text-books as "Hart's Manual of Composition and Rhetoric;" covering such subjects as Punctuation, Diction, the Properties of Styles, Figures of Speech, Versification, and especially the practice of Prose Composition.

The knowledge required of Ancient History is such as may be obtained from Smith's "Smaller History of Greece" and "Smaller History of Rome."

It is believed that these requirements can be met by a bright and determined scholar residing in any part of the state. The proper text books are easily procured. The examination is meant to be thorough and strict, but is not meant to be so technical or exacting as to deter scholars who have not had the best advantages of tuition. Students who show a capacity to pursue with profit the course marked out, are sometimes admitted on condition that they will make up their deficiencies. At the same time thorough preparation, where it can be had, is of the greatest importance. Parents and teachers are earnestly requested to give good counsel in this respect to those who are coming to the University.

The following suggestions are made for the guidance of those who are able to do more than master the requisites above stated:

Although no requirements in Natural Science are specified, the study of Local Botany, Mineralogy and Natural History is earnestly recommended, both because of the knowledge which may be acquired, and because of the habits of accurate observation of nature which may thus be formed in early youth.

Students are advised to devote at least one year to the study of Latin before entering the scientific department. It will greatly help their acquisition of Modern Languages, and will be useful in their study of science. Allen and Greenough's Grammar and Reader are especially commended as good manuals for this purpose.

Proficiency in some one or more of the Modern Languages is also very desirable.

A much more detailed statement than is here given, of the right method of preparation, has been published as No. 6 of the "Bulletin of the University of California." Copies of this will be sent by mail to any one who applies for it.

FOR ADVANCED STANDING:

Candidates for advanced standing, whether from other Colleges or not, in addition to the preparatory studies, are examined in those already pursued by the classes which they propose to enter.

Applicants should be at least sixteen years of age, and bring satisfactory testimonials. Young ladies, as well as young men, are received as students.

TUITION IS FREE to residents of California. Students from other States will be charged a matriculation fee of twenty-five dollars, and a tuition fee of fifty dollars per year, payable in advance, twenty-five dollars at the beginning of each half year.

EXAMINATIONS FOR ADMISSION—1881

There are two series of Examinations for Admission: one held near Commencement time, the other at the beginning of the Academic Year, at the University buildings at Berkeley.

For 1881, the first will begin on Thursday, May 26th, at 10 o'clock, A. M., and continue three days; the second will begin on Wednesday, August 10th, at 10 o'clock A. M. and continue three days.

Candidates may apply at either time; but unless they live at a great distance, they will find it advantageous to appear at the first examination. Any minor deficiencies may thus be made up in the long vacation which precedes the opening of the year.

Candidates, on their arrival, may report themselves at once to the President or the Dean, in the North Hall.

The next Academic Year will begin at Berkeley, Thursday morning, August 7th. Instruction will begin on Monday, August 15th, at 9 A. M., when every student will be expected to be present.

All candidates for admission must conclude their examinations by August 12th.

The Post Office address of the University, of the officers and students engaged in the Colleges of Science and Letters, is Berkeley, California,

CALENDAR FOR 1880-81.

1880—August 5—Beginning of the First Term.

December 15—End of the First Term.

[Winter Vacation of three weeks.]

1881—January 6—Beginning of the second Term.

May 26, 27, 28, 30—Examinations for Admission.

June 1—COMMENCEMENT—End of the year,

[Summer Vacation of ten weeks.]

August 10, 11, 12—Examinations for Admission.

August 11—Beginning of the First Term.

December 21—End of the First Term.

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